

5.4 Dividing Decimals

5.4 Objective A: Divide Decimals.

Dividing by a Decimal

Step 1: Move the decimal point in the divisor to the **right** until the divisor is a whole number. (multiplying by 10s)

Step 2: Move the decimal point in the dividend to the **right** the same number of places as the decimal point was moved in Step 1. (Same # of *10s)

Step 3: Divide. Place the decimal point in the quotient directly above the moved decimal point in the dividend.

Ex. 1.

<p>a. $36 \div (-0.06)$</p>	<p>b. $1.296 \div 0.27$</p>	<p>c. Divide -4.2 by -0.6</p> <p>$6 \times 5 = 30$ $6 \times 7 = 42$</p>
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5.4 Objective B: Estimate when Dividing Decimals.

<p>Ex. 2. $70.56 \div 7.$</p>	<p>Estimate 1: Round to one's place</p>	<p>Estimate 2: Rounded to one nonzero digit</p>
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5.4 Objective C: Divide Decimals by Powers of 10.

Fill in the following blanks with a fraction and a decimal:

1. Dividing by 10 is the same as multiplying by _____ or _____.
2. Dividing by 100 is the same as multiplying by _____ or _____.
3. Dividing by 1000 is the same as multiplying by _____ or _____.

Ex. 3.

a. $12.9 \div (-1000)$

b. $26.87 \div 10$

5.4 Objective D: Evaluate Expressions with Decimal Replacement Values.

Ex. 4. Let $x = 5.65$, $y = -0.8$, and $z = 4.52$.

a. $z \div y$

b. $x \div y$

Ex. 5. Is $x = 12.16$ a solution for $\frac{x}{4} = 3.04$?

5.4 Objective E: Solve Problems by Dividing Decimals.

Ex. 6. A new homeowner is painting the walls of a room. The walls have a total area of 546 square feet. A quart of paint covers 52 square feet. If the paint is sold in whole quarts only, how many quarts are needed?

Group Review: pg. 372 #8, 14, 26, 38, 44, 48, 50, 70, 76, 78